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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,200	07/26/2006	Jingwei Zhang	284467US2PCT	9279
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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER A. MINH D				
ART UNIT 2821		PAPER NUMBER		
NOTIFICATION DATE 02/13/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/565,200

Applicant(s)

ZHANG ET AL.

Examiner

Minh D. A

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/20/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 18-300 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a response to the Applicants' filing on 07/26/2005 and an amendment dated 12/20/07. In virtue of this filing and this amendment,

- Claims 1-30 are originally filed;
- Claims 1-17 are canceled (in virtue of this amendment);
- Thus claims 18-30 are now presented in the instant application.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-25 and 27-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannopoulos et al (Patent No: 6, 359, 387).

Regarding claim 21, Giannopoulos discloses, an electrical supply device configured to deliver energy to a structure that includes at least first and second electrodes (EL1 and EL2) and a space containing a gas to be excited, the device comprising: a voltage generator (Vhv); an inductor in the form of a transformer(the transformer (T5) is resonant transformer and it uses the inductance of its winding in combination with capacitance(Cr5) in series as shown in figure 5) provided with a primary winding(Wp5) and with a secondary winding (Wlc), the primary winding(Wp5) connected to the voltage generator (Vhv) and the secondary winding (Wlc) connected to the first and second electrodes[Ws5] to supply the first and second electrodes with a

periodic voltage of a frequency; and resonance means (control circuit (11) for fixing the frequency at substantially the resonant frequency of the system the structure and the inductor (Lr5); wherein the resonance (control circuit(51)) means comprises a switch (G1) placed in a path from the voltage generator (Vhv) to the primary winding of the transformer (T5), and a control system (control circuit (51) connected to the switch (G1-G2) for open and close over a period, wherein closing of the switch(G1-G2), which is closed for a duration(see dual clock generator (37) for providing clock signal for inverter(G1 and G2)(col.5, lines 55-65), is triggered by choice at one of the following instants: at a zero crossing of the current flowing the structure(when the controller (51) for turn off the switch(G1-G2)); when the voltage crosses a threshold voltage; at a threshold light level(when the controller (51) for turn On the switch, then the current will flow to lamp and switching time to provided desired lamp operating parameters and Rs5 for measuring a zero current and the Rs5 may be used to detect the lamp operating parameters to achieve desired control)((col.6, lines 25-31).

Regarding claim 20, Giannopoulos discloses wherein the resonance (control) means is configured to operate for a plurality of resonant frequencies (see the predetermined frequency between 20 KHz to 60KHz, col.4, lines 29-31).{

Regarding claim 22 and 24, Giannopoulos further discloses comprising a resistor (Rs) for measuring the current that delivers, to the control system (control circuit) having a plurality of switches), an image of the current (zero current) flowing through the structure, the closing of the switch within the period being triggered at the current zero crossing(when the control turns OFF) and wherein the duration of the time

during which the switch is closed can be adjusted according to energy to be delivered to the structure(when the control turns ON). See control(51) and the sensor (Rs).

Regarding claim 23, Giannopoulos further discloses comprising means (Rs) for measuring the voltage coupled to the control system, the closing of the switch within the period being triggered when the voltage crosses the threshold voltage. Col.6, lines 25-31).

Regarding claim 25, Giannopoulos discloses a gas discharge lamp comprising the frequency is between 10 and 300 KHz. See col.2, lines 20-21 as shown the frequency is between (20KHz to 60 KHz).

Regarding claim 27, Giannopoulos discloses an assembly comprising a structure that includes at least first and second electrodes(W5, as shown in figure 5) and a space containing a gas; and the supply device(since the lamp is gas discharge lamp and two electrodes).

Regarding claim 28, Giannopoulos discloses, wherein the structure includes two dielectrics associated respectively with the first and second electrodes and spaced apart so as to create the space. Since the discharge gas lamp should has a dielectrics associated with electrodes to prevent the electric short and spaced apart for install a gas.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Giannopoulos et al (Patent No: 6, 359, 387) in view of Sun et al (Patent No: US: 6, 020, 691).

Regarding claims 18-19, in figures 1-4, Giannopoulos does not teach that, wherein the voltage is at least partly sinusoidal and for truncating the voltage (less voltage).

Sun discloses wherein the voltage is at least partly sinusoidal as shown in figures 4-5.

It would have thus been obvious to one having ordinary skill in the art to include the above voltage is at least partly sinusoidal or for truncating the voltage disclosed in Reference of Sun in the gas discharge lamp of Giannopoulos to achieve the claimed invention. As disclosed in reference of Sun, the motivation for the combination would be increased the ignition for high intensity of lamp and would be improved the stable lamp arc operation.

5. Claims 26 and 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Giannopoulos et al (Patent No: 6, 359, 387) in view of Yoshida et al (Pub. No. US 2002/0027412).

Regarding claims 26 and 29-30, Giannopoulos discloses in the figures 1-5 that, the gas discharge lamp comprising the first and second electrodes of the gas discharge lamp.

However, Giannopoulos does not disclose that, the gas discharge lamp having the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

Yoshidat discloses in the figures 6-8B that, the lamp circuit comprising the structure forms a flat lamp for a backlight and for deposition system for plasma CVD process.

1. It would have been an obvious to one of ordinary skill in the art at the time the invention was made to employ the first and second electrodes of the structure forming the flat lamp and for deposition system for plasma CVD process such as suggested by Yoshidat in the lamp circuit of Giannoulos in order to improve the backlight and improve to use in the fluorescent layer.

Response to Arguments

6. Applicant's arguments, see remark/arguments, filed 12/20/07, with respect to claims 18-30 have been fully considered and are persuasive.

Citation of relevant prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Raiser et al (Pub. No: US 2002/0175629) discloses a method for starting a discharge lamp.

Prior art Okamoto et al (U.S. Patent No. 2002/0093295) discloses a light source device of a dielectric barrier discharge lamp.

Prior art Conrad et al (U.S. Patent No. 6,488,819) discloses a process and apparatus for chemical conversion.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Dieu A whose telephone number is (571) 272-1817. The examiner can normally be reached on M-F (5:30 AM-2: 45 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Owens Douglas W can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner
Minh A
Art Unit 2821
February 4, 2008
/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821